

Are young adults encouraged to join the construction industry?

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Abstract

The construction industry is currently suffering from a lack of skilled workers, from builders and plumbers, to quantity surveyors and architects. Reasons for this include the recession and that the retiring workforce is not being replaced by younger generations. This is having a huge impact on the country's ability to keep up with the demand for houses that need building; consequently meaning there is a shortage in homes in the country also. The research question addressed in the paper is: What can be done to encourage young adults (14-16 years old) to join the construction industry? The research question is answered through a critical literature review and analysis of questionnaire responses. The results show that there is little education on the construction industry to encourage young adults, and that it is perceived to be a dirty and low status industry to work in. On this basis, it is recommended that the Government and professional bodies need to do more to educate children in schools on what the construction industry truly is, and what opportunities it has for a good career. An initiative that was introduced in 2017 was the apprenticeship levy, which persuades companies to employ apprentices and up skill current employees subsequently encouraging school children to move directly into the construction industry. By schools, universities, colleges and businesses supporting each other it allows longevity and sustainability of the construction industry to be strengthened.

Introduction

The construction industry is currently battling with a shortage of skilled tradesmen and professionals as many of the current workers are aging and young adults are not interested in joining the construction industry. There is also a growing demand for young adults to join this employment sector as the construction projects are increasing due to a housing shortage within the UK. Agency Central (2018), reported that the UK's construction output is at an all-time high since the year 2000, however the UK have not got the skilled labour to keep up with the expanding construction programme. RG Group (2016) also confirm there is evidence young adults would prefer to study towards other sectors rather than the construction industry. Another contributing factor that has caused this issue dates back to the recession in 2009. Many skilled tradesmen left the construction industry moving in to other employment sectors and have not been replaced. Since then, investment has increased within the construction industry, enabling more properties to be built, however partially due to an aging workforce and the lack of new younger recruits, the UK have not got the required workforce to support the construction programme.

The Royal Institution of Chartered Surveyors (RICS) Chief Economist, Simon Rubinsohn explained three things having a major impact on the construction industry; there are not enough houses being built, construction programmes cannot be met and salaries have inflated (Theconstructionindex.co.uk, 2016). The Construction Industry Training Board (CITB) also stated that construction growth within in the West Midlands is 1.3%, however the employment rate has only increased by 0.4%, hence the delay in construction programmes. Therefore a method to encourage young adults to join the construction industry must be found.

The main objectives within this study is to find out the following:

- Why are the younger generations not joining the construction industry?
- Investigate what the industry is already doing to help fill skills shortage gap.
- Discover what the government is doing to encourage companies to invest in the labour shortage.
- How is the skills shortage affecting the construction industry

By following these objectives it enabled the researcher to find an adequate method to encourage young adults to join the industry. To complete this study, a literature review has been completed to find out what methods have already been carried out. This was continued by carrying out a questionnaire to review the views of the young adults leaving school to start a career.

Literature Review

Agency Central (2014), explain there are many reasons why there is a skills shortage within the construction industry such as the last recession, market increase, salary inflation, Brexit, aging workforce and millennials.

Skills shortages and its impact

The last recession caused a huge decline in employment within the construction industry; the CITB explained that the total construction output hit an all-time low in 2009, and therefore forced many construction workers to leave the industry. The CITB (2018) explained that these workers have never been replaced and has left a shortfall within a booming market. Due to the small workforce within the construction industry, it has proven difficult for employers to recruit. Therefore one of the incentives to entice applicants is an increase in salaries. Dominic Claeys-Jackson from Prospects (2017) and construction equiter (2016) reported that salaries had increased by 6%, a rate three times larger than the rest of the workforce. Brian Berry, Chief Executive of the Federation of Master Builders (FMB) (2018) also explained that 'two-thirds of those running small and medium-sized construction firms are struggling to hire bricklayers and carpenters as construction skills shortages hit a record high'. Brexit has left many employers and employees with doubts over their job security, and this could prove to have a huge impact on the industry. Jodie Cox from the Independent (2017) reported that 176,500 European workers are employed within the industry, meaning that a huge vacuum could be left. The industry is also battling against an aging workforce. In 2013 the CITB announced that over 400,000 people were expected to leave the industry within the next 5-10 years and the rate of employment is not matching the amount of workers retiring. Radford (2017) explained that due to the age of the workforce many tradesmen are retiring from the industry and are not being replaced. Therefore the workforce is not meeting the requirements of the expected construction programme impacting hugely on young adults as there is such a housing demand and a shortage of workers, that are reducing as the amount of experienced workers are not given the time to help develop the skills of trainees entering the industry. Subsequently millennials are having a huge impact on the construction industry as they are not joining the sector and Neil Martin of Lend Lease (2016) describes that the industry is poorly communicating with young adults and not describing what the industry has to offer and what career opportunities are available and therefore the workforce will reduce until this issue is corrected.

Hilary Osbourne (2016) from The Guardian explained that the impact of the skills shortage covers issues such as the housing programme, salary inflation and a smaller workforce. RICS Chief Economist, Rubinsohn (2016) also explained that the labour shortages in the construction sector are causing significant delays at various stages of the construction process and cannot keep up with the demand of building 110,000 houses per year. Therefore the construction industry cannot build enough properties to house the expanding population (Theconstructionindex, 2016). Due to the construction industry demanding more

progress with a limited workforce available, construction companies are battling for tradesmen and professionals, enabling employees to have higher salary expectations.

Efforts to reduce skills deficit

There are many ways that the industry is trying to reduce the labour shortage. One of the main methods is through training and an example of this is the Construction Youth Trust (CYT) (2017). CYT offer short courses that are designed to present the opportunities that exist within the industry. The CYT aims their courses at young people aged between 18-30, who may be unemployed.

Apprenticeships are also a popular method to help reduce the skills deficit as there are many advantages to them, such as the employer being able to apply for funding and having the benefit of training an individual within their company whilst learning the companies model and working methods, and the apprentice has free training earning a salary for his service whilst gaining qualifications. The RICS (2018), are promoting 'degree apprenticeships' which have similar advantages to a regular apprenticeship; however these are aimed at A-level students with the intention of reducing the skills deficit in professional positions such as in quantity surveying and architecture. This enables experienced employees to train apprentices which enables the average age of an aging workforce to be reduced. However apprenticeships are not always completed. Alan Woods from FE Week (2017), feels that one of the main factors is that employers are not reassuring the trainee that there is a position available for them once they have completed their qualifications. He further explained that apprentice's employment should pause in between each of their qualification levels as sometimes the apprentice can see himself as a permanent apprentice rather than as a valued employee, thus not completing the intended qualifications. He also explained that "getting young people into apprenticeships should be celebrated, but we need to remember that crossing the finish line is just as important as starting the race."

In 2017 the Government enhanced the apprenticeship-funding scheme by introducing an apprenticeship levy to companies who had salary outgoings greater than £3 million (GOV.UK, 2016). The levy is 0.5% of their salary output; however companies can recover the costs by employing apprentices. The Government took that view that companies needed to employee and train more employees, enabling the individuals to gain qualifications whilst working.

Work experience and sandwich courses are also good methods to persuade students that the construction industry could include a career that is suitable for them. Many year 11 school students have the opportunity to gain 1-2 weeks work experience with an employer to help decide a career path for when they leave full time education. My World of Work (2018) explain many advantages of work experience and sandwich courses such as; it helps gain an insight in to work; it uses the required skills used within the work place; it develops self-awareness; it helps to understand the links between school subjects and work and it helps the students meet new people.

The Chartered Institute Of Building (CIOB) (2016), produced an innovative method to encourage 12-14 year olds to become more interested in construction by releasing software called Craft Your Future which is an adapted version of a computer game called Minecraft. David Raven (2018) from the Mirror describes Minecraft as a simple video game where the user creates buildings from a basic landscape and then has to survive and protect his buildings. However throughout the adapted video game the user is expected to design and construct buildings using computer technology. The CITB (2017), said that "Experts say the video game Craft Your Future could be the key to attracting more young people to the construction industry". Bridget Bartlett Duty Chief Executive at the CIOB (2016), explained that the organisation is offering 16 hours of free lessons to teachers, CIOB members and other professionals to use in the classrooms, allowing as many people to have access to the software helping individuals to a solution to the skills shortages.

Another example of the construction industry attempting to improve the training within the sector is The Black Country Children's University. University of Wolverhampton (2018), explains 'as the University of Opportunity, they are committed to raising the aspirations of children within our communities'. Using this initiative it encourages young adults to learn about the construction industry and other sectors within the workplace. This initiative reaches out to many schools and academies in Wolverhampton, Sandwell, Dudley, Walsall and ECMAT (Education Central Multi Academy Trust).

Balfour Beatty (2018), explain that only 13% of the construction industry is made up of females, however they are encouraging more females to join the sector by raising the profile of their current female employees, campaigning to help females join the industry and using their 'Women In Construction and Engineering' (WICE) awards to promote it. Through this Balfour Beatty expect women's participation to increase to 25% by 2020.

By reviewing these main areas, it enables further research to be reviewed, detail and recommend new methods to reduce the skills deficit, encouraging young adults to join the industry.

Methodology

A mixture of primary and secondary research was used for this study. Naoum (2013) describes quantitative research as an enquiry into human nature and social or human problems based on a hypothesis or testing a theory that can be measured numerically, and statistically analysed. Therefore questionnaires were developed, using a mixture of fixed, closed and, open-ended responses enabling the participant to elaborate on their answers. A likert scale was also used using a scale of 1-5. The questionnaire's enable the researcher to collect data and opinions of young adults to find out the opinions of why they think there is a skills shortage, what the construction industry is and what the future of the construction industry contains.

Naoum (2013) explains that a literature review is an effective method of existing data that is essential to this study. This data also gives the researcher the opportunity to learn how other researchers and professional bodies such as the RICS and CIOB perceive the issues within the construction industry. By performing a literature review the researcher has the opportunity to gather further information in three main sections which are; why is there a skills shortage? What is the impact? And what is the industry doing to research the skills shortages?

By reviewing the information that has already been completed it has enabled a questionnaire to be formed to complete primary research. Naoum (2013) describes the literature review as an essential stage to conduct a research project. To help find further information about the skills shortages within the construction industry, journals from construction bodies such as the CIOB, RICS and the CITB, Government documents and Office of National Statistics (ONS) documents have been identified and studies to ensure that research and data has been maximised enabling a full research study has been completed. When this study was taking place the ethics of young people was considered.

Results and Analysis

This section summarises the data, enabling the researcher to depict and analyse the information provided to allow significant outcomes. Questionnaires were handed out to school children aged 14-16. 100% of the 54 questionnaires sent out were returned, however not all of the questionnaires were fully completed, although the data collected from the incomplete questionnaires has been used for this study. The questionnaire was aimed at both males and females, between the ages of 14 and 16. There was a total of 29 females and 25 males that responded, with 32 of these being 14 years old and 21 being 15 years old. The first section of the questionnaire asked the recipients about their awareness of the construction industry. They were asked about any education they have received about the

sector, why there is a skills shortage within the industry and what they think the construction industry is.

The aim of the questionnaire was to discover what young adults knew about the construction industry; why they would not join the industry; what would encourage them to join the construction industry and what they think the future of the construction industry is. By sending out the questionnaire it enabled a general summary of young adults to be made, and consequently a review on improvements to the construction industry.

When answering the question on whether they had been educated about the construction industry, the total average answer was 2, which reflects as poor knowledge of the industry.

The following series of questions discussed the reasons for skills shortages within the construction industry.

Table 1 Variables for a skills shortage in the construction industry

Variables	Overall Mean	Male Mean	Female Mean
Aging population	3.09	3.17	3.03
Poor job security	3.17	3.13	3.21
Gender equality	3.29	2.91	3.61
Poor job security	3.21	3.17	3.25
Brexit	2.78	2.7	2.86

Table 1 shows on average, neither gender felt that many of the variables were an important factor influencing the skills shortages within the industry. However, table 1 also shows that males and females had different views about gender equality and the males did not feel this was as important as the females. Both genders also felt that Brexit was not an important factor as the average answer was only 2.78.

The respondents were then asked about the available education and training within the industry. Initially the respondents were asked about awareness they had of the courses available within the construction industry. The overall mean between the two genders was 3.17 as the males average result was 3.24 whereas the females equated to 3.1. The following question discussed whether the respondents felt they had received adequate careers advice to step into further education. The average answer was 3.19, as the males average result was 3.12, however the females had more confidence with the advice they had been provided as there average result was 3.24.

The second section of the questionnaire asked the respondents about the available training and education available within the construction industry. Subsequently the respondents were asked if they would consider applying for an apprenticeship within the industry only 67% said they would. However only 53% of females said they would compared to 84% of males.

The respondents were then asked if they would consider a degree apprenticeship within professional disciplines such as construction management, commercial and real estate, building surveying, architecture or quantity surveying. The average answer was 2.21. The females felt that this would be a poor option for their careers as there average answer was 1.5. However the males felt this was a slightly better option with an average answer of 3.

The third section of the questionnaire asked the respondents were asked about what would encourage them to join the construction industry. The first question within this section asked the respondents if they felt a construction version of the videogame Minecraft could help persuade young adults to join the construction industry. The average answer provided for this question was 3.48 between the two genders, as the average answer provided by the males was 3.7, whereas the average answer from the females was only 3.31.

Table 2 Reasons not to join the construction industry

Variables	Overall Mean	Male Mean	Female Mean
Poor job security	2.48	2.52	2.44
Poorly marketed, and you don't know enough about the industry	3.44	3.43	3.44
You already know what career path you want to do in another sector	3.76	3.36	4.07
Low salary	2.81	2.81	2.81

When the respondents were asked why they would not join the construction industry poor job security and low salaries did not prove to be an important factor for both genders. However when both genders were asked about poor marketing and the respondents not knowing enough about the industry, they felt this was more of an important factor. Males also felt that they knew the career path they wanted to follow, and therefore they would not consider the construction industry as a career route.

The respondents were then asked which other sectors they would consider for their own careers. Some of the examples offered were; Information Technology (IT), nursing, the police, gaming, mechanics, barbering and sport.

Table 3 Enablers to join the construction industry

Enablers	Overall Mean	Male Mean	Female Mean
More information about what the industry has to offer regarding careers and prospects.	3.2	3.43	3.04
Higher salaries.	3.8	4.18	3.5
More investment to promote apprenticeships, training and education.	3.04	3.52	2.68
Sample courses to have more of an incite of the industry.	3.18	3.68	2.79

When the respondents were asked what would encourage them to join the construction industry, the males explained that increased salaries would encourage them to consider a career in this sector. The males also felt that more investment to promote apprenticeships, training and education could prove to be more beneficial compared to the females. The females also did not feel that sample courses to gain more of an insight into the industry would help encourage them to join the industry.

Table 4 Initiatives to attract young adults to join the construction industry

Initiatives	Overall Mean	Male Mean	Female Mean
Experience of the existing construction workers.	3.33	3.36	3.3
The young adults joining the construction industry.	3.69	3.59	3.78
Future technology ie; robots, drones, mobile phones and plant.	4.02	3.86	4.15
Industry amount of female construction workers.	3.56	3.09	3.93
Increased amount of migrant workers.	3.31	2.86	3.67

Within the fourth section of the questionnaire the respondents were asked about what they felt the future of the construction industry holds. Table 4 displays that the females felt technology is important as the average answer was 4.15, whereas the males did not feel the migrant workers were important to the future of the construction industry.

Discussion

The skills shortage is affecting the construction industry in many ways, but most significantly the UK's housing shortage, aging workforce, rising salary costs and the UK's construction

programme to build the required properties. RICS Chief Economist, Simon Rubinssohn confirmed that the labour shortages within the construction sector causes the industry to be inefficient, impacting the plans to build the required 110,000 properties per annum to keep up with the housing demand (Theconstructionindex.co.uk, 2016). Having a small labour force within the sector has enabled the current skilled labour to demand higher salaries as there is a higher competition between the construction companies. Dominic Claeys-Jackson reported that salaries have increased by 6%, which was three times larger than any other sector, and furthermore Wilmott Dixon explained that some construction professionals are resigning from their current positions and are being reemployed in consultancy roles (Prospects, 2018). For the foreseeable future this will only rise as the aging workforce will be retiring from the industry. Currently, 16% of the skilled labour force are between the ages of 55-64, and Shirley Radford (2017), explained that the rate of retirement is set to increase, and the CITB (2013) projected in 2013 that over 400,000 people will leave the construction industry in the next 5-10 years. This proves that it is imperative for the construction industry to attract young adults to join the sector, to be able to build the required properties within the country efficiently and within sustainable budgets. However this needs to be quick to enable new talent to gain the experience from the existing skilled men before they leave the industry.

One of the main elements of this study was to find out why younger generations are not gaining jobs as skilled trades within the construction industry. Within the first section of the questionnaire respondents were asked 'have you been educated about the construction industry and the potential careers within the sector?' followed by asking for the respondents understanding of the construction industry. 75% of respondents stated that their education about the construction industry was either 1 or 2 out of 5, whereas only 1 person felt that they had been well educated about this sector. When the respondents explained their understanding of the construction industry, 47% put a generic 'building' answer and a further 43% of the respondents put that they did not know what it was. The results displayed a view that the students had poor knowledge of the construction industry as they had not been educated about the sector. It is more likely that young adults would choose a career in another sector, as they described jobs such as the police, IT and midwifery as more attractive career routes. Neil Martin of Lend Lease (2016) described the industry as poorly communicating with young adults of what the construction industry has to offer and what career opportunities there are. This is backed up by the research carried out as a survey by YouGov found that only 3% of young people searched for opportunities within the construction industry as many views of the industry is low status, dirty and badly paid, a view that has stigmatised the industry for many years (CIOB, 2018).

Another part of this study was to find out whether young adults had been educated to understand the criteria they needed to join the construction industry. Section 2 of the questionnaire discussed the available education and training within the construction industry and if the respondents were aware of the opportunities. 70% of students felt that they had a good careers education. The following question asked if the respondents had been offered adequate careers advice for when they step into further education, again many of the respondents felt that they had received adequate careers advice as 72% again put 3 or above. This response complements the Government venture to promote apprenticeships within the industry and the RICS's new initiative to introduce degree apprenticeships. Evidently many young adults are willing to apply for apprenticeships within the construction industry as 72% of the respondents explained that they would apply for a trades apprenticeship within the construction industry. This information explains that many of the students are gaining general careers advice; and many young adults would be prepared to join the construction industry if the opportunities became available.

The literature review discusses the new initiatives the construction industry has introduced to attempt to reduce the skills deficit within the sector such as: degree apprenticeships, an enhanced apprenticeship program and a construction version of a videogame called Minecraft. However it also describes that only 68% of apprenticeships were completed within the construction industry in 2016. This shows that apprentices need to be valued by their employers. This can be done by adequately training them and offering the individual a full-

time position upon completion of their studies. They will gain adequate experience to help shorten the skills shortage gap. 58% of respondents felt that degree apprenticeships were a good incentive to join the construction industry; therefore more information needs to be provided to enable the students to apply for positions, enabling them to join the construction sector. As described within the literature review there are many construction organisations that offer free courses giving an insight and the offer of work experience within the construction industry, however, it also describes this initiative as poorly marketed and therefore respondents were asked if they would participate in free training if they were given the opportunity, 64% of the respondents said that they would participate in free training. The construction industry needs to market the opportunities within the construction industry to a higher standard, allowing young adults to gain more of an understanding of the sector. Voluntary courses allow people to gain work experience and qualifications such as Construction Skills Certification Scheme (CSCS) cards allowing them to apply for roles within the building industry. Construction companies have also had to change their employment and training strategies since the introduction of the apprenticeship levy (2017) to ensure that funding can be secured.

It is evident that the construction workforce is aging, and therefore the Government must find a method to attract a new younger workforce within the construction sector. The construction industry have introduced new methods such as degree apprenticeships and computer technology as well as offering employers grant funding to employ younger workers. However it is also evident that the general public does not know enough about these schemes and still have a poor appreciation of the industry. The construction industry offers voluntary courses utilising charities, trusts and organisations that are funded through the Government, that help unemployed individuals back into the construction industry. The Government need to promote this, by initially marketing the sector in a better light so that young adults are attracted to the construction industry, and secondly by ensuring that the public are more aware of the Government funded courses available. The Government introduced an apprenticeship levy in 2017 subsequently persuading companies to employ apprentices and up skill current employees. There has been a mixed response to the levy and apprenticeship recruitment had declined within the first annual quarter of the introduction, however the levy has persuaded organisations to alter their recruitment and training strategies to ensure employees are getting the bespoke training they require.

The analysed data explains that the UK construction industry have implemented new strategies to encourage young adults to join the construction industry as well as enhancing new and existing methods. It is also evident that the young adults who completed the questionnaires are aware of the education available however they are not aware of the potential careers within the construction industry as they have a poor knowledge of this sector. Finally statistics and journals describe the construction industry as being poorly marketed and therefore only 3% of young adults' consider taking a career within the construction industry. Adults are being encouraged to join the industry, however the industry and Government are not maximising the potential of the sector, and more could be done to make young adults aware of the initiative in place to encourage them to join the industry.

Conclusion

The aim for this study was to find out what can be done to encourage young adults to join the construction industry. The results from the collected data show that the construction industry is attempting to reduce the skills deficit by designing computer games, implementing degree apprenticeships and enhancing the apprenticeship programme. It also shows that the construction industry is poorly marketed; young adults do not have any knowledge of the construction industry and therefore do not consider taking a career within this sector. However 64% of young adults explained that they would attend free courses to gain an insight into the construction industry and a further 72% of respondents said that they would apply for apprenticeships.

In conclusion, the data shows that the Government and the construction industry need to enhance the current initiatives that have been introduced to the sector. However more importantly, students who are currently at school need to be educated before they leave for higher education and a method that has been introduced is the Black Country Children's University however this needs to be increased nationally. They need to be taught about the construction industry at a younger age (pre-16 years old), so that students can have a better opportunity to choose a career in construction. This can be done by offering introductory courses as part of the curriculum, completing seminars and presentations and offering the students work experience with local construction companies. Therefore, it is a trilateral working collaboration between schools, industry and universities to encourage the younger generation to join the construction industry which will provide longevity and sustainability of the construction industry to be strengthened. There are equality and diversity issues and at this present time only 13% of the construction industry is occupied by female workers however this also needs to be increased and future research needs to be undertaken.

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